UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)	
Office Action Summary		10/511,238	CHANG ET AL.	
		Examiner	Art Unit	
		YONG SIM	2629	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 September 2008</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>15-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>15-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/26/2008</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

9/26/2008 has been entered.

Response to Arguments

2.   Applicant's arguments filed 9/26/2008 have been fully considered but they are

not persuasive.

        With respect to the Applicant's argument regarding claim 15, the Applicant

argues that Cui adjusts backlight brightness based on the state of a computer

and does not disclose or suggest outputting the adapted visual data to the

separate user terminal, wherein the display capability information is hierarchically

structured, much less backlight luminance to be adjusted according to the usage

environment of the separate user terminal, as in Claim 15.

        However, Examiner respectfully disagrees. Examiner respectfully

acknowledges that Cui indeed does not expressly describe sending or outputting

the adapted visual data to "the **separate** (emphasis added) user terminal," but

Claim 15 does not explicitly recite said "separate" user terminal. Instead, Claim 15 recites "a particular user terminal," and the adapted visual data is outputted to "the particular user terminal." Examiner respectfully asserts that on broadest reasonable interpretation, a particular user terminal can be construed as being any device that a user may interact or use. In Cui, the particular user terminal is where the user interacts with the display in Fig. 1. The display data of the display device is sent to the system connected to the user terminal of the display device and the system adjusts the brightness of the display data and outputs the adapted data to the display (See the rejection to claim 15 below.).

Further, Examiner respectfully asserts that the hierarchical display capability information was described in the previous Office Action. As can be seen in Fig. 6, the backlight luminance information must be provided in step 606. A software program controls the display image brightness and display backlight brightness. The control cannot be accomplished without such backlight information included as a sub-element. Please refer to Para 0037 and the previous Office Action.

Therefore, the argument is moot and the previous rejections are maintained.

Specification

1.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required:

>   Claim 23 – 26 recite the term, "a computer readable storage medium," but
>
>   there is no antecedent basis for this phrase in the specification.   Please make
>
>   the appropriate corrections.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

2.   **Claims 15 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by**

Cui (US 2003/0001815 A1).

Re claim 15, Cui teaches a visual data adaptation method comprising: adapting

visual data in response to received display capability information of a display device in a

particular user terminal and a usage environment of the particular user terminal (Para

0037; "If a color segment brightness level exceeds or falls below the respective

segment threshold/display capability by a certain amount, this information is relayed to a

software program, which determines whether the display image brightness or backlight

brightness should be adjusted." The display capability information is the information

used to maintain a pre-determined display image quality. The particular user terminal is

where the display device as shown in Fig. 1. Para 0038; "an ambient light sensor is

used to determined the brightness of ambient light surrounding a display monitor, in

which the display image will be display. The image may then be adjusted to account for

ambient light brightness."); and outputting the adapted visual data to the particular user

terminal, wherein the display capability information is hierarchically structured to include

backlight luminance information as a sub-element of the display capability information

(Para 0037; "when a color brightness level exceeds or falls below a threshold by an

amount, an interrupt is generated causing a software program to either program the

graphics gamma unit to adjust the display image brightness or enable the PWM to

adjust the display backlight brightness in order to maintain a pre-determined display

image quality." In order to maintain the pre-determined display image quality, which is

the display capability, the software program must contain both the display image

brightness and the backlight brightness information as sub-elements to dynamically

adjust the image brightness.), and the backlight luminance information is described as a

numerical value ranging from a lowest possible value to a highest possible value that is

adjusted according to the usage environment of the particular user terminal (Para 0037;

"if a target display image quality can be achieved by adjusting the backlight brightness

while maintaining a target display device power target, then the PWM will be
programmed accordingly. Otherwise, the target display image quality will be achieved
by adjusting the display image brightness." The adjustment of the backlight brightness is
conducted by a program wherein the backlight brightness is described digitally in
numerical values. The range of the backlight brightness information is determined by
the target display image quality described above. In other words, if the highest possible
value of the backlight is not sufficient, the software program will relay the information to
adjust the image data.).

Re claim 16, Cui teaches the visual data adaptation method as recited in claim
15, wherein the visual data is RGB data of pixels (Para 0035; "The graphics gamma unit
effects the brightness of an image to be displayed on a display monitor by scaling each
sub-pixel color." The sub-pixel color data are RGB data.).

Re claim 17, Cui teaches the visual data adaptation method as recited in claim
15, wherein the adaptation is to control pixel value of the visual data according to the
backlight luminance information by shifting an RGB value (Para 0035; "The graphics
gamma unit effects the brightness of an image to be displayed on a display monitor by
scaling each sub-pixel color." Scaling the sub-pixel color value is equivalent to shifting
and RGB value.).

Re claim 18, Cui teaches the visual data adaptation method as recited in claim

15, wherein the backlight luminance information is adjusted according to the adjusted

visual data transmitted from the user terminal (Para 0037; "other decision algorithms

may be used to determine whether a display image brightness should be changed or

backlight brightness should be modified in order to achieve or maintain an image quality

while achieving or maintaining a power-consumption target." The adjustment of the

backlight brightness is conducted by a program according to the adjusted visual data.

After adjusting the visual data, further adjustment is necessary to maintain the image

quality, the backlight brightness will be adjusted. The software will dynamically adjust

both the visual data and the backlight brightness as the threshold of the image quality

necessitates them.).

Re claim 19, Cui teaches a visual data adaptation apparatus comprising:

an adaptation means for adapting visual data in response to received display capability

information of a display device in a particular user terminal and a usage environment of

the particular user terminal (Para 0037; "If a color segment brightness level exceeds or

falls below the respective segment threshold/display capability by a certain amount, this

information is relayed to a software program, which determines whether the display

image brightness or backlight brightness should be adjusted." The display capability

information is the information used to maintain a pre-determined display image quality.

The user terminal is where the display device as shown in Fig. 1. The adaptation

means is the system as shown in Fig. 1. Para 0038; "an ambient light sensor is used to

determined the brightness of ambient light surrounding a display monitor, in which the
display image will be display. The image may then be adjusted to account for ambient
light brightness."); and an outputting means for outputting the adapted visual data to the
particular user terminal, wherein the display capability information is hierarchically
structured to include backlight luminance information as a sub-element of the display
capability information (Para 0037; "when a color brightness level exceeds or falls below
a threshold by an amount, an interrupt is generated causing a software program to
either program the graphics gamma unit to adjust the display image brightness or
enable the PWM to adjust the display backlight brightness in order to maintain a pre-
determined display image quality." In order to maintain the pre-determined display
image quality, which is the display capability, the software program must contain both
the display image brightness and the backlight brightness information as sub-elements
to dynamically adjust the image brightness.), and the backlight luminance information is
described as a numerical value ranging from the lowest possible value to the highest
possible value that is adjusted according to the usage environment of the particular user
terminal (Para 0037; "if a target display image quality can be achieved by adjusting the
backlight brightness while maintaining a target display device power target, then the
PWM will be programmed accordingly. Otherwise, the target display image quality will
be achieved by adjusting the display image brightness." The adjustment of the backlight
brightness is conducted by a program wherein the backlight brightness is described
digitally in numerical values. The range of the backlight brightness information is
determined by the target display image quality described above. In other words, if the

highest possible value of the backlight is not sufficient, the software program will relay

the information to adjust the image data.).

The limitations of claim 20 are substantially similar to the limitations of claim 16.

Therefore, it has been analyzed and rejected substantially similar to claim 16.

The limitations of claim 21 are substantially similar to the limitations of claim 17.

Therefore, it has been analyzed and rejected substantially similar to claim 17.

The limitations of claim 22 are substantially similar to the limitations of claim 18.

Therefore, it has been analyzed and rejected substantially similar to claim 18.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

5.   **Claims 23 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cui in view of MacPhail (US 6,593,943 B1).**

Re claim 23, Cui teaches a computer readable storage medium in which data is recorded, the data comprising: display capability information of a display device in a user terminal (Para 0037; "If a color segment brightness level exceeds or falls below the respective segment threshold/display capability by a certain amount, this information/data is relayed to a software program, which determines whether the display image brightness or backlight brightness should be adjusted." The display capability information is the information used to maintain a pre-determined display image quality. The user terminal is where the display device as shown in Fig. 1. The adaptation means is the system as shown in Fig. 1. The data must be stored in a memory which is processor/computer readable storage medium.), wherein visual data is adapted by a video adaptation apparatus (The adaptation apparatus is a part of the system which uses a software to adjust visual data as shown in Fig. 1.) that is particular from the user terminal (As can be seen in Fig. 1, the system and the display device in a user terminal are particular to each other.) according to the display capability information and a usage environment of the particular user terminal (Para 0038; "an ambient light sensor is used to determined the brightness of ambient light surrounding a display monitor, in which the display image will be display. The image may then be adjusted to account for ambient light brightness.") the display capability information is hierarchically structured to include

backlight luminance information as a sub-element of the display capability information (Para 0037; "when a color brightness level exceeds or falls below a threshold by an amount, an interrupt is generated causing a software program to either program the graphics gamma unit to adjust the display image brightness or enable the PWM to adjust the display backlight brightness in order to maintain a pre-determined display image quality." In order to maintain the pre-determined display image quality, which is the display capability, the software program must contain both the display image brightness and the backlight brightness information as sub-elements to dynamically adjust the image brightness.), and the backlight luminance information is described as a numerical value ranging from the lowest possible value to the highest possible value that is adjusted according to the usage environment of the particular user terminal (Para 0037; "if a target display image quality can be achieved by adjusting the backlight brightness while maintaining a target display device power target, then the PWM will be programmed accordingly. Otherwise, the target display image quality will be achieved by adjusting the display image brightness." The adjustment of the backlight brightness is conducted by a program wherein the backlight brightness is described digitally in numerical values. The range of the backlight brightness information is determined by the target display image quality described above. In other words, if the highest possible value of the backlight is not sufficient, the software program will relay the information to adjust the image data.).

But does not expressly disclose said metadata.

However, MacPhail teaches a method for displaying computer-based information including detecting an instruction to display an information unit based on the data and or metadata stored in storage medium (MacPhail: Col. 10, line 63 – Col 11 line 34).

Therefore, taking the combined teachings of Cui and MacPhail, as a whole, it would have been obvious to a person having ordinary skill in the art to incorporate the idea of displaying information based on metadata as taught by MacPhail into the computer readable storage medium as taught by Cui to obtain a computer readable storage medium in which metadata is recorded wherein the metadata comprises display capability information of a display device to adapt visual data according to the display capability information in an efficient was since the metadata can travel along with other data such as video data.

The limitations of claim 24 are substantially similar to the limitations of claim 16. Therefore, it has been analyzed and rejected substantially similar to claim 16.

The limitations of claim 25 are substantially similar to the limitations of claim 17. Therefore, it has been analyzed and rejected substantially similar to claim 17.

The limitations of claim 26 are substantially similar to the limitations of claim 18. Therefore, it has been analyzed and rejected substantially similar to claim 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YONG SIM whose telephone number is (571)270-1189. The examiner can normally be reached on Monday - Friday (Alternate Fridays off) 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YONG SIM/
Examiner, Art Unit 2629

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629

12/15/2008